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Muriel G. Dunnigan

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No	10/699,491
Filing Date	
Assignee	PCBU Services, Inc.
Group Art Unit	1621
Examiner	Unknown
Attorney's Docket No	PC3-059
Title Processes for Purifying Reactio	n Products and Processes for Separating
Chlorofluorinated Compounds	_

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

The attached Form PTO-1449 is submitted in compliance with 37 C.F.R. §§ 1.56, 1.97 and 1.98. Pursuant to Federal Register Vol. 69, No. 182, pg. 56542 (September 21, 2004) no copies on any cited U.S. patents or U.S. published application are included herewith. No admission is made regarding whether all the submitted references are prior art.

The listed references were cited by, or submitted to, the Office in the parent, co-pending application of the above-identified application. The above-identified application is a continuation or divisional application of co-pending application Serial No. 09/966,158, filed September 28, 2001. Such prior disclosure is sufficient for the above-identified application as far as copies of the references are concerned. 37 C.F.R. § 1.98(d) and MPEP § 609(2).

This Supplemental Information Disclosure Statement is being filed before receipt of the first Office Action. Therefore, no fee is believed to be required. However, in the event that a fee is required please charge the fee specified under 37 C.F.R. § 1.17(p) to Deposit Account No. 23-0925.

Citation of these references is respectfully requested.

Respectfully submitted,

Dated: 5/24/06

By:

Reg. No. 46,791

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LIST OF ART CITED BY APPLICANT (Use several sheets it necessary)

ATTY, DOCKET NO. PC3-059

SERIAL NO. 10/699,491

APPLICANT: Yuichi kubo, el al

FILING DATE October 31, 2003 **GROUP** 1621

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Şubciass	Filing Data If Appropriate
	AA	1.132,636	03/1915	Taylor, et al			
	AB	1.926,395	09/1933	T. Midgley, Jr.			
	AC	1,926,396	09/1933	Magley, Jr.			
	AÚ	2.021,981	11/1935	Bichowsky			
	AC	2,413,696	01/1947	Downing, et al			
	AF	2,456,028	12/1948	Simons			
	۸G	2,519,983	08/1950	Simons			
	ΛH	3,080,430	03/1963	Cohen			
	N	3,479,286	11/1969	Gambaretto, et al			
	AJ	3,656,553	04/1972	Rainaldi, et al			
	AX	3,715,438	02/1973	Huggett			
	AL.	3,822,207	07/1974	Howard, et at			
	АН	3,844,354	10/1974	Larsen			
	AN	4,014,799	03/1977	Owens			
	AO.	4,225,404	09/1960	Diefrich, et al			
	AP	4,226,728	10/1980	Kung			
	ΑÚ	4,446.923	05/1984	Martin			-
	AR	4,459,213	04/1972	Uchida, et al			
	AS	4,536,298	08/1985	Kamei, et al.			
	AT	4,688,407	05/1987	Gerard, et al			
	AU	4,810,403	03/1989	Bivens, et al			
	AV	4.826,610	05/1989	Thacker			
EXAMINER		DATE CONSI	DERED				

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*Examiner's Iniúats		Occument Number	Oate	Name		Class	Subclass	Filing Date If Appropriate
	AA	4,851.595	07/1989	Gumprech1				
	AB	4,876,405	10/1989	Gervasutti				
	AC.	4.937,398	06/1990	Tung. et al				
	AD	4,945,119	07/1990	Smits, et al				
	AE	4,954,271	09/1990	Green				
	AF	5,040,609	08/1991	Dougherty, et al				
	AQ.	5,084.190	01/1992	Fernandez				
	All	5,115,868	05/1992	Dougherty Jr., et al				
	Δi	5,141,654	08/1992	Femandez				
	N	5.523.501	06/1996	Keliner. et al.				
	дк	5,562,861	10/1996	Nimitz, et al.				
	~	5,730,894	03/1998	Minor	-			
	AM	6,065,547	05/2000	Ellis, et al.				
	AN	6,291.729	09/2001	Fiao -				
	40	6,346,203 B1	02/2002	Robin, et al.				
	AP	6,461,530	10/2002	Robin, et al.				
	AQ	6,478,979	11/2002	Rivers, et al.				
	RA	6,763,894	07/2004	Schoenrock				
	AS	6,849,194	02/2005	Robin, et al.				
	AT	5,416,246	05/1995	Krespan et al.	-			
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*EXAMINER: considered. I	Initial it notude o	reference considered, who opy of this form with next (ether or not citation to	on is in conformance with MP o applicant.	EP 609; Draw line U	Yough c ta	tion if not in a	conformance and not

Sheet 3 of 7

Form PTO-1449 SERIAL NO. U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT APPLICANT: Yulch likubo, et al (Use several sheets if necessary) FILING DATE GROUP October 31, 2003 1621 FOREIGN PATENT DOCUMENTS Class Subclass noissienanT Country Date Document Number ÇA 902590A 08/1962 Canada Æ EP 0 039 471 A1 11/1981 Europe 01/1998 **EPO** EP 0 253 410 AD EP 0 383 443 A2 08/1990 Europe ΛE 06/1991 EP 0 434 409 A Europe Æ EP 0 481 618 A1 04/1992 Europe AC. EP 0 570 367 B1 01/1993 Europe 08/1990 RU 2068718 C1 Russia A 1,546,505 09/1970 Germany 03/1991 WIPO WO 91/02564 WO 91/04766 04/1991 **PCT** 09/1991 PCT WO 91/12853 ... WO 93/24586 12/1993 PCT WO 98/37043 08/1998 PCT PCT WO 96/40834 12/1996 AP WO 03/029173 04/2003 PCT 10/1953 UK 698,386 AR GB 1,132,636 11/1968 UK 44 JP 51034595 09/1974 Japan AT JP 57-93070-A 06/1982 Japan Laid Open Hei 1-05/1989 Japan 115999 EXAMINER DATE CONSIDERED *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through altation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. SERIAL NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT (Use several sheets if necessary) APPLICANT: Yulchi !kubo, et al FILING DATE **GROUP** October 31, 2003 1621 FOREIGN PATENT DOCUMENTS, CON'T. Sho 50-50864 04/1975 Japan (Laid Open Sho 51-131100) 03/1973 Japan Sho 48-19093 AC Sho 52-25679 07/1977 Japan ۸Đ 03/1992 Lai Open Hei 4-Japan 96770 AF AG AH AI AK AM AO * AR AT ш AAV DATE CONSIDERED **EXAMINER** *EXAMINER: Intital it reference considered, whether or not citation is in conformance with MPEP 609; Oraw line through citation if not in conformance and not considered include copy of this form with next communication to applicant.

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Form PTO-1449 ATTY, DOCKET NO. U.S. DEPARTMENT OF COMMERCE SERIAL NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT . APPLICANT: Yuichi likubo, et al (Use several sheets I) necessary) FILING DATE GROUP October 31, 2003 1621 OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.) McFarland, Mack, "Chlorofluorocarbons and ozone", 1989, Environ. Sci. Technol., Vc . 23, No. 10, pp. 1203-1207 Malcomb, J.E., "Report 1177 Interim Report Vaporizing Fire Extinguishing Agents", Airgust 1950, Engineer Research AS and Development Laboratories, Petroleum and Distribution Branch, pp. i-90 Wuebbles, Donald J., "The Relative Efficiency of a Number of Halocarbons for Destroying Stratospheric Ozone", AC January 1961, Lawrence Livermore National Laboratory, University of California, pp. -11 Wuebbles. Donald J., "Chlorocarbon Emission Scenarios: Potential Impact on Strato pheric Ozone", February 1983, Journal of Geophysical Research, Vol. 88, No. C2, pp. 1433-1443 Molina, et al., "Ultraviolet Absorption Cross Sections of Several Brominated Methanes and Ethanes of Atmospheric AC Interest", February 1982, J. Phys. Chem., 1982, 86, 2672-2676 The United Nations Environment Program, Montreal Protocol Assessment, Technology Review, "Report of the Halons Technical Options Committee", June 1989, Draft for Peer Review Larsen, Erlc R., "Halogenated Fire Extinguishants: Flame Suppression by a Physical Mechanism?", 1975, Halogens AG Research Laboratory, The Dow Chemical Corporation, Midland, Michigan, pp. 376-402 Belles, Frank E., "Chemical Action of Halogenated Agents in Fire Extinguishing", 195f, National Advisory Committee AH for Aeronautices, Technical Note 3565, pp. 1-30 Kauschka. Von Gunther, et al., "Calculation of thermodynamic substance data and resiction balance with poly- and AJ perhalogen hydrocarbons", October 1976, Chemistry Section of the Humboldt Univer: ity in Berlin, Vol. 10, pp. 1-22 Moore, Jeanne P., et al., "Halon Alternatives Extinguishment Testing", 1989. Center ft r Technologies to Protect Stratospheric Ozone, New Mexico Englneering Institute, University of New Mexico, Al suquerque, New Mexico, presented at the International Conference on CFC & Halon Alternatives, October 10-11, 1989, Washington, D.C., pp. Smart. B.E.. "Fluorocarbons", 1983, The Chemistry of Functional Groups, Supplemen D, Chapter 14, pp. 803-855 Chemical Encyclopedia, "Bolshaya Rossiiskaya Entsiklopedia" Moscow, 1992, Scienti ic Publishing House, Vol. 3, ٨L Med-Pol The United Nations Environment Program. Montreal Protocol Assessment, Technology Review, "Final Report of the ΑМ Halons - Technical Options Committee". August 1989 Reld, Robert C., "The properties of gases and liquids", 1987, pp. 153-157 AN "Part IV The Evolution of the Montreal Protocol", 1987, Section 4.1 and 4.2, pp. 265-2"5 40 Hynes, Robert G., et al., 'Shock-Tube Study of the Pyrolysis of the Halon Replacement Molecule CF₂CHFCF₃", 1999, J. Phys. Chem. A, Vol. 103, pp. 54-61 Joint Assessment of Commodity Chemicals No. 24. Pentalluoroethane (HFC 125), (Et:ETOC) May 1994, pp. 14-20 AC Kubota, Kazuo, "Current State and Measures Related to Chlorofluorocarbon Regulations. Part I". 1989. Valqua AR Review, Vol. 33, No. 2, pp. 1-8 (English translation - pp. 1-18) Malcolm, J.E., "Halogenated Extinguishing Agents", Part II Research at the Corps of Engineers' Laboratones, 1951, A\$ NFPA Quarterly, pp. 119-131 Nelson, Thomas P., "Findings of the Chlorofluorocarbon Chemical Substitutes International Committee", April 1988, AT U.S. Environmental Protection Agency, Air and Energy Engineering Research Labora: 279, EPA/600/9-88/009, pp. i-Smart, Bruce E., Fluorinated Organic Molecules, 1988, Molecular Structure and Energetics, Vol. 3. pp. 141, 152 ALI Tominaga, Takeshi, "Global and Technical Countermeasures Against Flon", 1989, The Nikkan Kogyo Shinbun, Ltd., pp. 134-137, 156-163, 170-174 (English translation) EXAMINER DATE CONSIDERED *EXAMINER: Initial II reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant,

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		PATENT AND TRADEMARK OFFICE	PC3-059	10/699,491		
		LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Yuichi I kubo, et al			
		_	FILING DATE October 31, 2003	GROUP 1621		
OTHER REFE	RENO	CES (including Author, Title, Date, Pertinent Pages, Etc.)				
	M	Index to Decisions and Annexes of the Partles to the Montrea	al Protocol, Helsinki Mee ing	, p. 79, 128, 241, 1989.		
	AB	Marshal Sittig, Chemical Process Monograph No. 22, Fluorin	ated Hydrocarbons and Pol	led Hydrocarbons and Polymers, 1986, page 13.		
	AC	McLinden, Ph.D, Didion, Ph.D. "Quest for Alternatives". Ashn	se Journal, December 1987	, ρgs. 69-78.		
	AD	National Fire Protection Association, NFPA 2001 "Clean Age	nt Fire Extinguishing Sys:en	ns" pps. 2001-1 and 2001-1		
	۸۰	Creitz, Journal of Research of the National Bureau of Standa	rd, Vol. 65A, No. 4, pp. 239	396 (1961).		
	AF	Simons, Fire Extinguishing Agents, in H.G. Bryce, Industrial A of Hudlicky, Milos, Chemistry of Organic Fluorine Compound	Aspects of Fluorine Cherrist 3 (1962).	ry, at pages 354-358, Vol. 8		
	NG.	R. Hirst and K. Booth, Measurement of Flame-Extinguishing (1977).	Concentrations, Fire Tec and	ology, Vol. 13(4): 296-315		
	V 1	Final Report on Extinguishing Agents for the Period Septemb Conducted by Purdue Research Foundation and the Departm 009-engr 507, Army Engineers Research and Development L	ent of Chemistry, Purdu : U	Covering Research Iniversity, Contract W-44-		
	u	Research at the Corps of Engineers Laboratories, Halogenat (October, 1951).	ed Extinguishing Agents. N	FPA Quarterly pgs. 118-13		
•	7	Decision of the Technical Board of Appeal Regarding Europe	an Patent No. 0439579, No	vember 14, 2001.		
1	ux	Banks, Findings of the Chlorofluorocarbon Chemical Substitu Report A-1-A-5, 05/1987.	tes International Commit ee	, Appendix A: summary		
		Hogue, Cheryl, "Substitutes for Halons: No One Chemical Su 493-495.	Itable ⁻ , Intl. Environment Re	porter, Nov. 21, 1990, pp.		
A	w	Federal Register Vol. 58, No. 90, May 12, 1993, pp. 28136-20	3149 and 28178-28185.			
•	W	"FM-200®, The New Solution for Fire Protection", June, 1993	, 11 pages.			
^	vo	Moore, P.E., "Fluorocarbon Halon Alternatives", Fire Salety E	ngineering, 1997, 3 pages.			
^	-	Hampson, Roger D., "The Success of FM-2008", Fire Safely	Engineering, Vol. 2, No. ,	1995, pgs. 21-23.		
	ω .	"Kilddie FM-200® Fire Suppression Systems". May 1994, 2 pa	ges			
	g .	"Real-Scale Halon Replacement Testing," CFC/Halon News,	March 1996, one page			
	اف	FM-2009 Waterless Fire Protection for Marine Applications,"	2003, 8 pages			
CAMINER		DATE CONSIDERED				

Sheet 7 of 7

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY, DOCKET NO. PC3-059	SERIAL NO. 10/699,491
		LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Yuichi I kubo, et al	
			FILING DATE October 31, 2003	GROUP 1621
OTHER REF	EREN	ICES, CONT. (including Author, Title, Date. Pertinent Pages, I	Ela.)	
	AA	Burkland, Robert E., "When It Comes to Fire Protection - Sprone page	eed Counts," Automotive Indi	ustry Agenda, March 2002
	AD	Mike Bennett, 'Halon Replacement for Aviation Systems,' In September 29 through October 1, 1992, Washington, D.C., p		Iternatives Conference,
	AC	Thornton, Al, *FM-200, A Unique Fire Fighting Agent," 1897 Protection, December 10, 1997, 10 pages	Taipei International Conferen	се оп Охоле Layer
	AD	The Appeal Decision in invalidation action for Patent No. 255	30075, 10 pages (translat on)	
	AE	International Fire Protection, "Great Lakes Chemical Corpora Nov/Dec 2000, 4 pages	alion - Company Profile." An I	MDM Publication, Issue 4
	AF	http://www.e1.greatlakes.com/wfp/product/jsp/articles.jsp *Ai *Healthcare Facilities Protected by FM-200® Waterless Fire I protected by FM-200®," and *Casino Properties Protected by	Protection Systems," "Mulleu	
	A/3	Nimitz , et al., "Halocarbons as Halon-Replacements: Techn Research Institute, University of New Mexico, Final Report, N		New Mexico Engineering
	АН	"A Review of the Toxic and Asphyxiating Hazards of Clean A Halon Alternatives Group, February 1995, 22 pages	gent Replacements for Halor	n 1301," A Report by the
	Ai	Hart-Winchester, *A Burning Issue: What Products Will Rep March/April 1995, pages 13-18	lace Halon 1301?" The Comp	puter Operations Manage
	~	Maranghides, et al., "Discharge System Modifications: Real Technical Working Conference, Albuquerque, New Maxico, I		ent Testing,* Halon Optio
	AK	Ellis. "Pleasure Boat Fire Extinguisher Choices," Burgee 26,	November 1996	· · · · · · · · · · · · · · · · · · ·
	AL.	"Scientific Assessment of Stratospheric Ozone: 1989", spon-	sored by the United Natio is I	Environmental Program
	АМ	Nat'l Fire Protection Assoc., Boston, Fire Protection Handbe	ook* 14 th ed., 2001, Sec 13/C	thap 4, pp. 13-20 to 13-26
	AN	Fukaya+ Journal of Flourine Chemistry, "First Extinguishing A	Ability of Perfluoroalkylam ne	s and 2000, pp. 143-14
	AO	Burns+, "Flourine Compounds in Anaesthesia" 1982, Vol. 37	7, pp. 278-284	
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